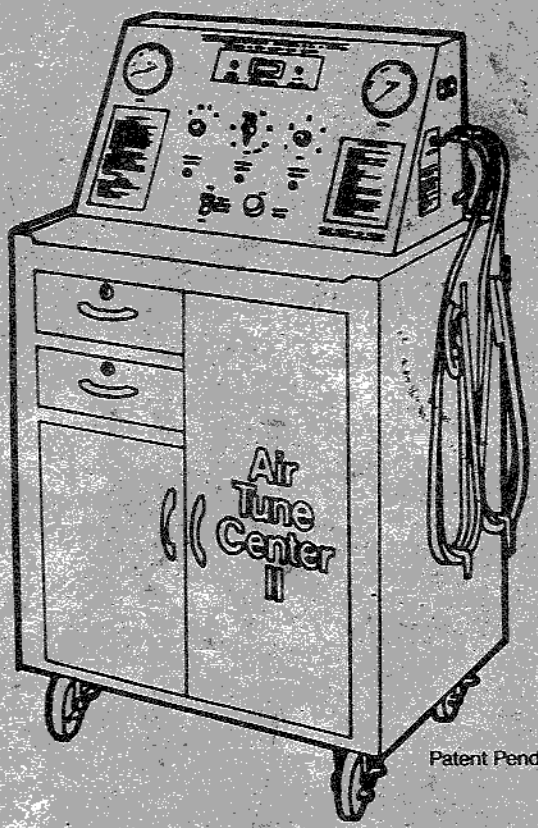
Air Tune Center II

OPERATORS MANUAL



Patent Pending

Murray Corporation
Cockeysville, Maryland 21030
Palestine, Texas 75801

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WARRANTY

Air Tune Center II is warranted for a period of one year from the date of purchase to the original purchaser to be free of defects in workmanship and materials. If the product fails within this period, it will be repaired or replaced at the Murray Corporation's option, provided the product is submitted with proof of purchase and freight charges are prepaid to the factory. This warranty does not apply to the products or parts broken from accident, shipping damage, abuse or any parts which have been tampered with or altered in any way. The above warranty then does not apply and the retail purchaser shall pay all cost for time (labor), material and transportation charges.

ASSEMBLY INSTRUCTIONS

1. Install handles on the two (2) drawers and the two (2) front doors using the eight #6 screws provided.
2. Place steel wool pads in the anti-splash pan and slide pan into the groove on the bottom of the cabinet in the rear. See Fig. 1.

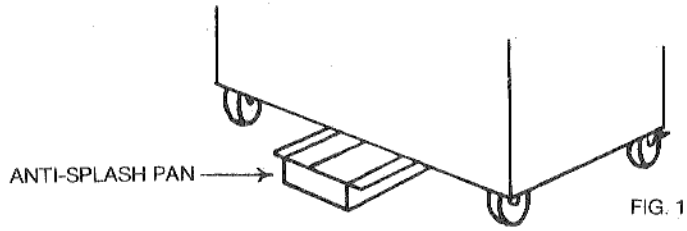

FIG. 1

3. Install hose coil brackets to the side of the cabinet using four (4) 1/4 x 20 screws, then install hose storage fitting to upper part of brackets with fitting pointing down using the two (2) fittings and nuts provided. See Fig. 2.

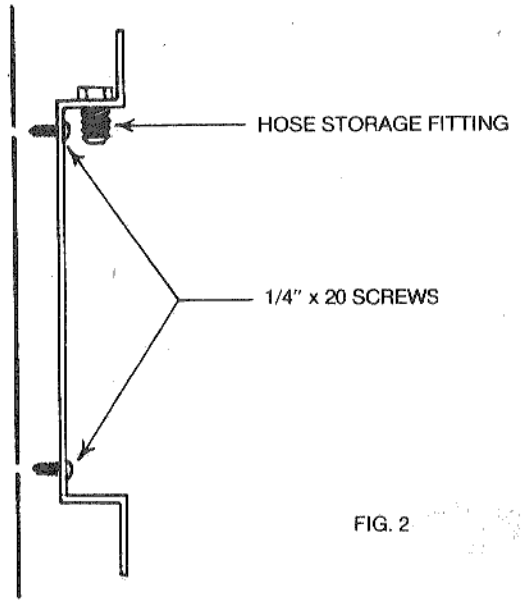

FIG. 2

4. Remove shipping cap from vacuum pump discharge port and install rubber vent tube, route through hole provided in the bottom of the cabinet. See Fig. 3.

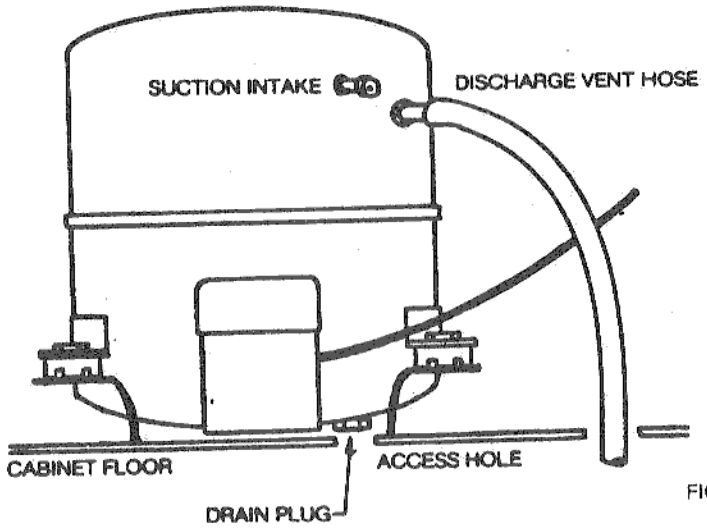

FIG. 3

5. Remove scale hold down shipping bracket and discard. See Fig. 4.

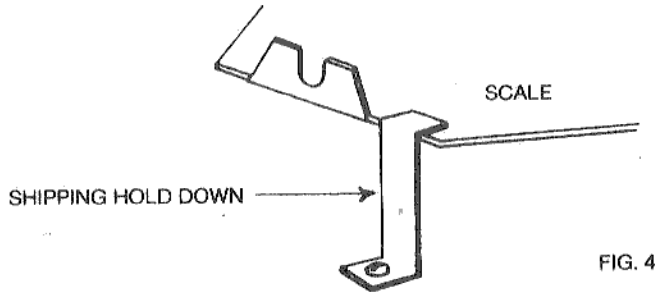

FIG. 4

6. Attach 96" blue charging hose to the service port on the side of cabinet marked "low", the straight end without core depressor attaches to the cabinet port. Attach 96" red hose to the port marked "high", straight end without core depressor to the cabinet port.

NOTE: WEAR SAFETY GOGGLES WHEN SERVICING OR HANDLING REFRIGERANT.

7. Connect blue 36" hose inside of lower cabinet to a 30 lb. cylinder of R-12, open R-12 valve, invert cylinder and place on scale (leak test). See Fig. 5.
8. Service oil tank per instructions and install on scale, attaching red 36" hose to oil tank. See Fig. 5.
9. Unit is now ready for use.

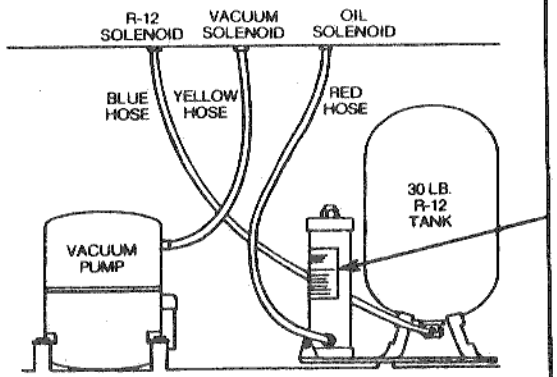

FIG. 5

REFRIGERATION OIL CYLINDER

Use clean, dry refrigeration oil only

FILL TO THIS LINE

To fill, disconnect oil charge hose from bottom of cylinder and remove cylinder from scale. Bleed pressure from cylinder by depressing schrader valve in top fitting. Remove cap, and fill with oil to line. Replace cap and hook low side charging hose to top schrader fitting on cylinder. Set controls to vacuum = 5 minutes, oil = 0, R-12 = 3 oz. Push start button and charge cylinder. Replace cylinder on computor scale and attach oil hose to bottom port.

NOTE: Oil cylinder must be off scale when performing the above operation.

REFRIGERANT TANK REPLACEMENT

1. Press "HOLD" button. Do not turn main power off.
2. Loosen R-12 tank hold down on scale and remove R-12 tank; close tank valve. Remove blue hose from empty tank and connect to new R-12 tank.
3. Turn R-12 tank valve "ON", check tank valve for leaks.
4. Invert tank and secure on scale with tank valve pointed down. Tighten hold down **(tank must be secured to scale.)**
5. Press "RESTART" button to finish charging.

OPERATING INSTRUCTIONS

ALWAYS WEAR SAFETY GOGGLES WHEN SERVICING OR HANDLING REFRIGERANT

TESTING AIR CONDITIONING

1. Make hose connections to system. Red high side to service port located on compressor high side, liquid line, filter drier or expansion valve. (adaptor may be needed)

   Blue low side to service port located on compressor suction line, POA, STV valve or accumulator.
2. On compressor with manual service valve midseat both valves after attaching red & blue hoses.
3. Bleed hose at right side of cabinet.
4. Start engine and adjust speed to fast idle.
5. Set A/C controls to "MAX" cooling and fan speed to "HIGH".
6. With windows and doors closed, allow system pressure to stabilize. Set blower fan to "LOW" and check duct temperature output, gauge reading ambient temperature and sight glass if required. (See chart below)

TEMPERATURE-PRESSURE RELATION
REFRIGERANT R-12

FAHRENHEIT	PSI	FAHRENHEIT	PSI
—20	0.6	65	63.8
—15	2.4	70	70.2
—10	4.5	75	77.0
— 5	6.7	80	84.2
0	9.2	85	91.8
5	11.8	90	99.8
10	14.6	95	108.3
15	17.7	100	117.2
20	21.0	105	126.6
25	24.6	110	136.4
30	28.5	115	146.8
35	32.6	120	157.7
40	37.0	125	169.1
45	41.7	130	181.0
50	46.7	135	193.5
55	52.0	140	206.6
60	57.7	145	220.3

SYSTEM SPECIFICATIONS

LOW SIDE SPECIFICATIONS

5 Component Systems (AMC, Independent Units, Ford, Imports)	Approximately 15-30
Ford	
5 components	15-30
with POA valve	28-32
with FOTCC	23-48
Chrysler	
5 components	15-30
with EPR	22-31
with ETR	22-30
General Motors	
with POA valve	28-32
with VIR system	28-32
with CCOT	15-30
CCOT with clutch cycling switch (pressure)	23-48

HIGH SIDE RULE OF THUMB

The high side gauge reading for any air conditioning system depends entirely on temperature of the day you are working. A good rule of thumb to follow—take that temperature of the day, add 100°, and that should be your approximate high side gauge reading. This can vary plus or minus 10%, depending on various conditions. This holds true for any automotive air conditioning system.

Normal High Side Pressure Gauge Reading According to Temperature

Ambient Temp. (front of condenser)	High Side Pressure Should Read (lbs. per sq. in.)
60° F.	95-115
70° F.	115-135
80° F.	150-170
90° F.	175-195
100° F.	210-230
105° F.	230-250
110° F.	250-270

DISCHARGING AIR CONDITIONING

1. Connect power cord to (115 V), turn main power switch "ON".
2. With engine "OFF" open bleed valve.
3. If pressure gauges do not read "O" psi after 5-10 minutes, turn vacuum pump on until low side gauge reads "O" psi, then close bleed valve.
4. Check compressor oil levels at this time only. Refer to specification on compressor or Basic Service Manual #209590.

EVACUATING

1. Set vacuum timer for ten (10) minutes.
2. When timer shuts off, gauge reading should hold for 2-3 minutes if there are no leaks in system.
3. Reset timer for thirty (30) minutes.
   NOTE: If vacuum pump cycles "on and off" check vacuum pump oil level and service. See Fig. 6

REFRIGERANT CHARGING

1. Set all switches and controls to "OFF" position
2. Turn main power switch "ON".
3. If evacuation is desired, set timer - the vacuum pump will start.
4. Set R-12 to the desired amount.
5. Press the "R-12 SET" button - ■ unit will "BEEP". (Must "BEEP")
6. Set OIL CHARGE to the desired amount.
7. Press the "START" button - ■ unit will "BEEP". (Must "BEEP")
8. If the vacuum pump is operating, computer will START charging on completion of the evacuation cycle. If the vacuum pump is OFF, charging will start when the "START" button is pressed.
   NOTE: Oil is charged first followed by R-12 charge as the desired charge is approached. Short bursts of R-12 is normal.
   A. The charge cycle can be stopped by pressing the "HOLD" button and restarted by pressing the "RESTART" button. Computer will retain memory and complete charge program selected.
   B. Charge cycle can be stopped by turning off the master power switch. (Computer will lose memory. Charging must be restarted from "STEP 1".)
9. If charge is not being transferred, the system alarm will sound ▬■ ▬■ 2 "BEEPS", 1 long, 1 short. To proceed, start engine, turn A/C "ON" and press "RESTART" button. If the alarm sounds again, the light on indicates which tank is empty.
   A. R-12 light on, press "HOLD" button. Replace R-12 tank and press "RESTART" button to complete charge.
   B. Oil light on, turn main power switch off service oil tank, start charging at Step 1.
10. When charge is completed, alarm sounds ■■ ■■, 2 short "BEEPS" (intermittently), charge read out will show 000.
11. High side protection shut-off. If the high side pressure exceeds 375 on the systems being tested the alarm will sound continuously and stop charging. Press "HOLD" button then correct condition and press "RESTART" button. This can be caused by over charging, defective fan clutch, overheating or restricted air flow through the condensor.

CHARGING THE ACCESSORY PORT

1. Connect a safety can tap valve to can.
2. Connect 36" blue hose to valve, connect other end with core depressor to accessory fitting on side of unit.
3. Open tap valve and charge to factory specification.
4. Always remove hose from accessory port when not in use and cap.

   NOTE: Accessory port may be used for service with 14 oz. can of refrigerant, leak find or 2 oz. oil charge.

AUXILIARY LOW GAUGE

This gauge is supplied with a 36" blue hose and is used for checking evaporator pressure or suction pressure in the suction line when vehicle is equipped with two (2) low side service ports.

MAINTENANCE

GAUGE CALIBRATION - remove lens by turning counter clockwise, turn screw in the face of the gauge until needle is pointing to "ZERO".

STORAGE

When storing Air Tune Center II for prolonged periods, to insure proper performance:

1. Cap all open hoses.
2. Turn off R-12 tank.
3. Change vacuum pump oil.

VACUUM PUMP OIL CHANGE

The vacuum pump should have the oil changed after every 30 days and must be changed after evacuating a contaminated system; such as a compressor failure or dehydrator failure. MOST FAILURES OF THE VACUUM PUMP OCCUR FROM CONTAMINATED PUMP OIL. To change the oil:

1. Place small drain pan under unit.
2. Remove plug in bottom of pump through the access hole provided in the bottom of the cabinet. (1/2" wrench)
3. Replace the plug making sure the O-ring is not damaged.
4. Unscrew vacuum pump suction hose from solenoid valve (behind drawer).

   Place suction hose into 12 ounces of General Motors' Transmission Fluid "Type A". (Dextron®)
5. Turn main power switch on, then turn the vacuum pump timer on. It will suck the oil into itself. DO NOT OVERFILL. THE PUMP HOLDS 12 OUNCES.
6. Reconnect yellow hose to solenoid.

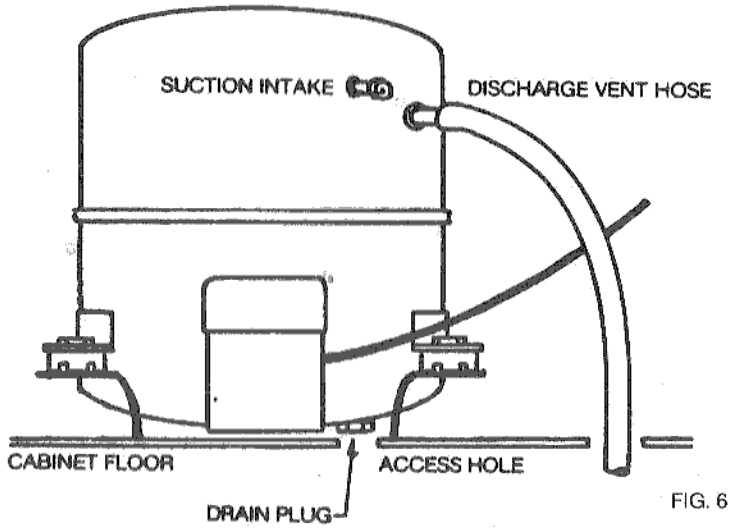

FIG. 6

FOR SERVICE INFORMATION CALL 301-628-7171

AIR CONDITIONING SERVICE PROBLEM ?

CALL

COLD LINE
301-628-7171

Form #874581